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# Worldwide Report

EPIDEMIOLOGY

No. 165

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# FIRST AUSTRALIAN SURVEY OF DOCTOR-PATIENT RATIO REPORTED

Melbourne THE AGE in English 9 Oct 79 p 3

[Report from Medical Reporter Philip McIntosh]

[Text]

A survey of the distribution of doctors in Victoria has found wide disparities between local government areas.

The survey found, for example, that the local government area of Melbourne had 177 general practitioners or one doctor for every 377 people.

Port Melbourne, with only six doctors, had a population:GP ratio of 1567, Collingwood 971, South Melbourne 926, Richmond 910 and Fitzroy 808.

People were also well served in Brighton, with one doctor for every 604 people, Malvern 638, Kew 787 and Hawthorn 826.

But the western suburbs had 2414 residents for every GP. Keilor had 3121 and Sunshine 3045.

Other poorly-served outer suburbs were Diamond Valley with 3019 people for every doctor, Lilydale 2724, Broadmeadows 2715, Knox 2239 and Springvale 2158.

The survey, the first of its kind in Australia, was conducted by Dr. Ian Rowe and Professor Neil Carson of the department of social and preventive medicine at Monash University.

Dr. Rowe said yesterday the survey relied on responses from almost 99 per cent of the 8200 doctors who applied for re-registration in 1978.

The survey showed that doctors who set up general practices in some southern and eastern suburbs would find tough competition but country areas were still under-served.

Werribee, with only seven doctors to serve a population of 37,300, was one of the worst-

served areas of the State with a ratio of 5329.

Dr. Rowe said he knew of two doctors who established practices in the Werribee area since the survey, but the ratio was still more than 4100.

In the country, Geelong had the second lowest ratio in the State, with 536.

Those areas with the least number of doctors per person were Narracan in central Gippsland with 9430, Rochester 7230, the eastern part of Pakenham 5800 and Beechworth 4860.

Daylesford and Creswick, with only one doctor each, also had ratios higher than 4000.

Professor Carson said the survey was to improve the uneven distribution of doctors by informing medical graduates where there was a need.

He said that until now, doctors had no information to guide them.

Professor Carson said that if a doctor chose one of the high ratio areas to establish a practice, he or she was assured of a reasonable living, provided a reasonable service was given.

On the other hand, Dr. Rowe said, doctors who set up practice in suburbs like Hawthorn, Kew and Brighton were "really going to find it tough".

"Some doctors have set up in solo practice in these areas, haven't achieved a viable practice, and have had to close down," he said.

Dr. Rowe and Professor Carson said similar surveys would be published each year to keep doctors up to date about changing doctor and population patterns.



Distribution of general practitioners in Melbourne	
Area	People for every doctor
Melbourne and inner suburbs	580
Western suburbs	2414
Northern and north-eastern suburbs	1830
Eastern suburbs	1350
South-eastern suburbs	1339
Victoria	1488

CSO: 5400

HEALTH DEPARTMENT CRITICIZED FOR POOR CARE OF ABORIGINES

Melbourne THE AGE in English 10 Oct 79 p 12

[Text]

CANBERRA. — The Federal Health Department should take more responsibility for the improvement of Aboriginal health standards, according to the Department of Aboriginal Affairs.

The department says recent emphasis placed on the living conditions of Aborigines detracts from the Health Department's responsibility to provide "acceptable and effective" services.

A health policy research paper produced by the department has criticized the failure of health services to care for Aborigines.

Background notes given to the Press on infant mortality rates in the Northern Territory say the department is reluctant to see infant mortality attributed to general living conditions as "these are being steadily improved".

According to the notes, the department believes that emphasis on "physical conditions should not detract from the responsibility health authorities have for providing acceptable and effective curative, preventive and promotive health services."

The background notes from the department follow a report by the national trachoma and eye health programme which criticised health services as an almost total failure.

## AUSTRALIA

### BRIEFS

LEPROSY IN QUEENSLAND--Leprosy was a disease likely to remain in Queensland for many years to come, a Royal Brisbane Hospital pathologist said yesterday. Within the State, 180 people were known to have various forms of leprosy, ranging from gross physical deformities to numbness in the hands. Most were aborigines and others who had spent all their lives in Queensland. Some were migrants who had contracted the infection abroad. Dr. Cooke, who for several years worked in Papua New Guinea, where leprosy is common, leaves for Fiji next month to help establish the W. J. Twomey Leprosy Hospital. [Excerpt] [Brisbane THE COURIER-MAIL in English 26 Sep 79 p 8]

ESQ: 5400

## COMMENTARY REPORTS EFFECTS OF DISEASE IN SUGARCANE PLANTATIONS

FL100156 Havana Domestic Television Service in Spanish 0000 GMT 10 Oct 79 FL

[Commentary by Raul Sarmiento]

[Excerpt] My commentary today specifically deals with the serious difficulties that exist in sugarcane agriculture for the next harvest, primarily due to the disease known as rust that has affected one of our principal [sugarcane] varieties, Barbados 4362, and which by extending throughout the country has become the most serious and strongest disease that has affected our sugarcane agriculture. This subject was covered by Alfredo Menendez, member of the party Central Committee and chief of its sugar department, at the national sugar harvest propaganda and information seminar held this weekend in Matanzas Province.

The effects of this plague, said Alfredo Menendez, along with other factors such as the late completion of the past sugar harvest, the drought that affected the northern areas of the country in July and August, as well as the low levels of sugarcane weeding and irrigation, along with the unfulfillment of last year's winter [sugarcane planting] plan, have resulted in very negative effects on the availability of sugarcane for grinding, which logically affects the production objectives of the forthcoming harvest.

Elimination of the Barbados 4362 variety is the only measure to fight this disease. To be able to undertake this task of demolishing the thousands of caballerias affected, it is necessary to insure the planting of all the sugarcane on the current winter plan since this will be the sugarcane we are going to grind in 1981.

CSO: 3400

# STATISTICS ON CANCER VICTIMS REPORTED

Athens I KATHIMERINI in Greek 21-22 Oct 79 pp 8, 15

[Article by Athens University Health and Epidemiology Professor D. Trikhopoulos]

[Text] According to today's statistics, one in three Greek males and one in four females are stricken by cancer at some time in their lives and 45 percent of them finally die. This means that out of 9 million Greeks alive today 1.2 million will die as a result of some form of cancer.

Despite the fact that these figures are alarmingly high, Greece is in a more favorable situation than most European countries (third among 25). This is due to the fact that the frequency of most cancer forms is relatively small in our country. National Oncological Institute [EOI] data (gathered by Papakhrisstopoulos and Khaniotis) show that the survival of cancer sufferers is not substantially different from that of cancer patients in other, more advanced countries--a fact which demonstrates that the treatment of cancer patients in our country is satisfactory, a fact which contributes to the relatively low mortality rate.

## Cancer and Smoking Connection

The more frequent and most deadly cancer in our country is lung cancer. More than 3,000 persons are stricken annually by lung cancer and 90 percent of them die from this disease. The relation between lung cancer and smoking is indisputable and has been proven in Greece by the research work of Professor A. Kanellakis and his collaborators. Female mortality is about six times less because 20 years ago women smoked less than men and it takes a long time for the disease to manifest itself. Lung cancer mortality is slightly greater in cities than in villages. This may be due to the increased number of smokers in urban areas or to atmospheric pollution even though the relation of the latter to cancer has not yet been proved.

Cancer of the stomach is very frequent in Greece. About 1,800 are annually stricken and 1,500 die from this disease. As with most of the diseases, stomach cancer is more frequent in men. In recent years an inexplicable

drop in stomach cancer cases has been observed in the advanced countries of the world. It appears that the technological developments are favorably influencing the frequency of this cancer, a fact which is an exception to the overall unfavorable relation that exists between industrialization and the frequency of most cancer types. The cancers of stomach and skin are the only ones more frequent in rural than in urban areas of the country.

Breast cancer (almost exclusively in women) and cancer of the large intestine (equally frequent in men and women) are third in frequency. Almost 1,500 women are stricken annually with breast cancer and 45 percent die. Even though breast cancer is most frequent in Greek women, it is nevertheless much less frequent than in other West European countries and North America. The factors indicated in this difference have not been determined but it is believed that nutrition plays an important role. Other factors contributing to breast cancer (early menstruation, delayed menopause, obesity, first child birth at an advanced age) do not substantially differ in Greece and other countries of Western Europe and North America and it is impossible, therefore, to justify the relatively advantageous position of Greece. The aforementioned factors are more frequent in the urban than in the rural population of Greece and thus can explain to some extent the increased frequency of breast cancer in cities than in villages.

#### Processed Foods and Cancer of Large Intestine

The large intestine cancer is more frequent in Western Europe and North America than in Greece where it occurs more in urban than in rural areas (about 1,500 cases in Greece annually, half of which are terminal). These facts can be explained on the basis of the assumption that cancer of the large intestine is more frequent in populations consuming processed foods since such foods do not promote the mobility of the intestines. Many researchers abroad and Manousos with his colleagues in Greece have verified that the rural populations with a lesser incidence of cancer of the large intestine are consuming greater quantities of processed coarse foods with large solid residues of excrement and a short time of intestinal passage.

Perhaps the most "characteristic" cancer in Greece is cancer of the liver which is five times greater than in other European countries and seems to be related to the hepatitis B virus which for reasons unknown is very common in Greece. At least 600 new cases appear each year and only a few of them have relatively good prognosis. Several Greek researchers such as Merikas, Hatzigiannis, Theodoropoulos and others have contributed to the clarification of the etiology of this cancer and their findings are recognized universally. It should be noted at this point that the most common form of hepatitis (hepatitis A) does not have any relation to cancer of the liver.

The uterine cancers (neck and endometrium) are jointly responsible for more than 1,000 cases and 400 deaths annually. Cancer of the uterus is more common among women of smaller income and women with premature and manifold sexual relations. In contrast, the endometrium cancer is more



frequent among women of higher economic classes and among women who are single and obese. Recent research in the United States shows that use of stimulating hormones during the climacteric period has unquestionable connection to endometrium cancer and is almost certainly true also among Greek women.

Leukemia of various types is also frequent in Greece (more than 1,200 cases and about 1,000 deaths annually). The etiology of leukemias which are equally divided among urban and rural populations and among lower and higher economic classes is generally unknown. Some factors (such as certain radiations and some industrial toxic factors) may be used under certain conditions of leukemia but their overall percentage of effectiveness is very small. Important progress has been made in recent decades especially in the treatment of leukemia in children.

Cancer of the prostate is very common among men (about 1,000 cases, 400 deaths annually). The etiology of the disease is unknown and does not seem to be related to the prostate's hypertrophy so common in persons of advanced age. This cancer is not as frequent in Greece as in other European countries and is less common among rural than urban people.

Sufficiently frequent (about 1,000 cases annually) are cancers of the stomatic cavity, larynx and esophagus--all related to smoking and perhaps to consumption of strong alcoholic beverages. With the exception of the esophagus, the prognosis for the other two is relatively good.

Skin cancer is perhaps the most common cancer in Greece and is related to some extent to excessive exposure to the sun and solar energy. But this cancer is so benign that it is not at all included in the statistics of neoplastic mortality. In contrast, cancer of the pancreas is rare and for unknown reasons appears to be becoming gradually rarer.

### Three Basic Ways To Cope With It

Looking at the cancer problem from a different perspective one can perceive three ways to fight it: etiological prevention, early diagnosis and proper treatment.

Proper cancer treatments preassure heavy costs because their results are already very limited (decreasing marginal effectiveness). In other words, further increase in expenses for technological equipment and in training specialized personnel is not commensurate with the effort to extend life and avoid untimely death. This does not mean, of course, that the costs of means for coping with cancer should not be increased but it becomes somewhat problematical as concerns their distribution.

Early diagnosis has been during the past decade the main target of the strategy for combatting cancer and includes various checkups and screenings. It is a fact that the possibility of effective treatment is much greater

when cancer is confined to its original breeding ground. It is also a fact that certain checkups and screenings (for breast and uterine neck cancers, for instance) have resulted in significant gains thus far. But in its totality, the strategy of early diagnosis has failed to check the mortality from most cancers. This is attributed on the one hand to economic and psycho-social factors (difficulty in organizing programs for massive checkups and screenings and to limited participation by the public in such programs) and on the other hand to biological factors (the most malignant cancers develop so fast as to make impossible their diagnosis in early stages).

The etiological (primary) prevention constitutes today the great hope for coping with many forms of cancer. In Greece we do know the cause of 25 percent of all cancers (the most important etiological factors are smoking, hepatitis B virus and strong alcoholic beverages, while the responsibility of certain industrial and medical factors has not been studied sufficiently in our country). It is believed that for the other 40 percent of cancers there is external (environmental) etiology even though the exact nature of the etiological factors has not yet been made clear (in this category one may classify dietary factors which seem to be related to the cancers of the large intestine, breast and endometrium). These facts suggest that primary prevention is the best strategy for coping with cancer. Moreover, the advantageous position of Greece in the international area--as concerns the various forms of cancer--reflects more the favorable conditions of the natural, chemical and social environment of our country and less the effectiveness of our medical relief. The safeguarding and further improvement of the quality of the total environment (general atmospheric and special industrial pollution, for instance), as well as of the limited one (smoking, bad nutrition and drug abuse, for example) are physical targets of preventive medicine and sound priorities of the overall health policy.

#### Biographical Sketch

D. Trikhopoulos was born in Volos, 1938; medical degree, 1963; doctor of medicine, 1965; assistant professor of medicine, 1971; specialized in pathology and microbiology, 1963-70; graduate studies in medical statistics, health and epidemiology at Harvard, Oxford and London Universities; professor of health and epidemiology, 1973, University of Athens; honorary member of the U.S. Public Health Society (sic); author of three books and about 150 articles in scientific journals published here and abroad; speaks French and English; president of the Inter-university Center; vice president of the Greek Section of the European Health Club; vice president of the Greek Health and Epidemiology Society; member of the advisory board of Scientific Research and Technology; member of the National Council of Oncology; temporary advisor to the International Agency of Research on Cancer (World Health Organization); served (1975-78) as council president of unsanitary trades; chairman of the State Population Commission; chairman of the Water Control Committee; member of the Health Committee for the Greek population; and member of the administrative council of the National Research Foundation.

## BRIEFS

INFECTIOUS HEPATITIS CASES--Between 28 August and 14 September, 27 cases of infectious hepatitis occurred in Tiszafured in Szolnok County. All the victims were under the age of 18 and most of them attended grade school. The fact that the cases occurred virtually simultaneously leads to the conclusion that there was a common focus of infection, unidentified to date. In the course of epidemiological investigations the role of the Tiszafured beach as probable focal point was noted. This appears to be substantiated by the fact that similar cases reported in other counties, namely Borsod, Heves and Hajdu, affected persons who had visited the beach at Tiszafured at a time which coincided with the incubation period of the virus. This means that infection probably took place in early August. [Budapest NEPSZABADSAG in Hungarian 20 Sep 79 p 9 WA]

CSO: 5400

## CHOLERA CASES IN CITY AREAS REPORTED

Calcutta THE STATESMAN in English 1 Nov 79 p 9

[Text] Cholera cases have been reported from some areas in Calcutta. In an earlier report of Calcutta Corporation it was said the disease was confined to slums where unhygienic conditions prevailed. But in its latest report the corporation authorities have recorded one case of cholera in Jamir Lane and another in Chetla.

Although the authorities said the people of the areas need not get alarmed, fresh appeals were made to them not to use "questionable" water sources. Dr N. R. Choudhury, Deputy Health Officer of the corporation, said on Wednesday that during the week ending October 20, 11 people contracted cholera. This year 155 people had been affected by the disease so far. But no death had been reported, Dr Choudhury said. Efforts were being made to disinfect tanks and stagnant water in ditches. Houses of afflicted people were being thoroughly cleansed, he added. So far 780,000 people had been inoculated.

Dr Choudhury claimed that cholera was on the decline in the city. He said the number of people attacked by the disease had been appreciably less than in the past few years. The number of deaths was also less. In 1977, seven people died of cholera, in 1978 the number declined to two and this year there had been no report of death till now. He had, however, received an unofficial report of the death of a five-year-old boy.

Dr Choudhury said the disease was still a threat to the city because of the non-availability of pure drinking water and poor conservancy and drainage conditions in the slums of Cossipore, Manicktolla, Kasba, Topsia and Tangra. He said Rs 1,50,000 [as published] would be provided in the coming financial year for a slum cleansing programme. A task force had been asked to make suggestions and it had submitted its report, he added.

CSO: 5400

## INDIA

### BRIEFS

ENCEPHALITIS SPREADS TO BIRBHUM--Encephalitis has spread to Birbhum district. According to reports received at Writers' Building on Monday, three people have died of the disease there since October 20. The disease has till now claimed 157 lives in Burdwan, 47 in Hooghly and 18 in West Dinajpur. Nearly 600 people have been suffering from the disease. Our correspondent adds: Eighteen people have died of encephalitis in the Balagarh area of Hooghly till Monday, according to Mr Abinash Pramanick, CPI(M) MLA. Forty-two people have been suffering from the disease. The Krishnagar district authorities are not sure that encephalitis has spread to Nadia. [Text] [Calcutta THE STATESMAN in English 30 Oct 79 p 9]

JAUNDICE EPIDEMIC--New Delhi, 3 Nov (AFP)--A jaundice epidemic has claimed at least eight lives in Bankura town and its suburbs in West Bengal state (capital Calcutta) during the past few days, it was reported today. Officials of the state were quoted as saying that about 62 people had so far been affected by the disease. [Text] [Hong Kong AFP in English 1320 GMT 3 Nov 79 BK]

CSO: 5400

## BRIEFS

SUMATRA SMALLPOX OUTBREAK DENIED--Jakarta, Oct 11 (ANTARA)--An Indonesian Health Ministry official categorically denied today that smallpox has broken out in South Lampung claiming a number of lives. The occurrence of the smallpox cases was reported recently by several newspapers. Dr Setiadji, head of the Epidemiology and Quarantine Directorate of the Health Ministry, declared Wednesday [10 October] the reported casualties in the Telukbetung and Panjang areas of South Lampung had been caused by "muntaber" (a cholera-type disease characterized by vomiting and purging of the bowels). Besides "muntaber" the area also had been hit by measles which frequently attacked children, he said. In view of the fact that the smallpox report also had spread abroad, he said the ministry's Directorate-General of Communicable Diseases Prevention and Eradication had issued a denial of the report direct to the World Health Organization and explained the actual situation, Dr Setiadji said. He noted that in fact Indonesia had been declared smallpox free 2 years ago, and that actually the disease could be pronounced as having been eliminated from the world. [Excerpt] [BK110727 Jakarta ANTARA in English 0718 GMT 11 Oct 79 BK]

CSO: 5400



IRAN

BRIEFS

CHOLERA DEATHS REACH 41--Tehran, 16 Oct (TASS)--Forty one persons died of cholera in Iran, it is reported by the Health Ministry of Iran. The cholera epidemic hit many provinces of the country this summer. Over 1,400 cholera cases have been registered here now. [Text] [LD161426 Moscow TASS in English 1330 GMT 16 Oct 79 LD]

CSO: 5400

## PILGRIMAGE RETURNEES TO BE CHECKED FOR FEVER

Jerusalem JERUSALEM POST in English 2 Nov 79 p 3

[Article by Ian Black]

[Text] The 20,000 Moslems from Israel and the administered territories returning home during the next few days following the annual haj (pilgrimage) to Mecca will have their temperatures taken at the Jordan bridges as a precaution against the spread of Rift Valley fever.

This is one of a series of measures being implemented by the ministries of health and agriculture and the Judea and Samaria Military government to keep the disease in check.

Rift Valley fever attacks livestock and is often transmitted to humans, in whom it produces symptoms similar to severe influenza complicated by bleeding. Although it is usually contracted by people who handle flocks, others can catch it too.

Any of the hajjis returning from Mecca who are found to be running a temperature will be hospitalized immediately, a spokesman for the military government announced yesterday. There will be follow-up medical treatment in such cases, he said.

Although experts assess the danger of the disease entering the area as "slight," no efforts are being spared to ensure that this possibility is reduced to an absolute minimum.

About a million livestock--sheep, goats and cows--have been immunized against the disease in the West Bank, the Golan, the Gaza area and Sinai over the past few months, and no livestock imports are currently permitted into the administered areas from the neighboring countries.

The 20,000 hajjis who will be returning from Saudi Arabia over the next few days include some 6,000 Israeli Moslems and about 14,000 others from the administered territories and East Jerusalem.

CSO: 5400

SIX CASES OF CHOLERA DISCOVERED IN JANIN VILLAGE

Jerusalem AL-SHA'B in Arabic 21 Oct 79 p 2

[Article: "Six Cases of Cholera Discovered in Maythalun in the District of Janin"]

[Tea Janin--In the district of Janin additional preventive health measu. taken after the discovery of six cases of cholera in the village of Maythalun.

The existence of the cases of cholera was confirmed in the Maythalun boys' school and five of those afflicted were put in the Janin hospital, with the sixth one being put in the National Hospital in Nablus.

All of the cholera victims are school pupils between the ages of 9 and 13, and their condition is now satisfactory. Zahran Hassumah, the deputy director of education, issued instructions to the school principals in the villages of Maythalun, Sanur, Siris, and al-Judaydah to undertake a general cleanliness campaign in the abovementioned villages. This was done after the appearance of a case of cholera in Siris. Junior high and high school students in the abovementioned schools are undertaking a campaign in cooperation with the health department in Janin, where health officials are participating in it.

The deputy director of education and Dr Sa'id Shahin, the health director of Nablus, have paid a visit to the Janin villages, have also distributed medicine to the people in neighboring villages, and have made appeals calling for vigilance and guidance in order to put an end to this disease and prevent it from spreading.

In addition, the health department in the municipality of Nablus has called upon citizens to be more concerned about health and to make sure that their fruits and vegetables are clean.

Dr Ibrahim Abu-Hatab has confirmed that the condition of the patient (Balal) Fayiz Salim, who was put in the Nablus hospital, is good and that he is recovering. He also confirmed that the hospital is fully prepared to deal with any more cases [of cholera].

## HEALTH, MEDICINE AGREEMENT WITH POLAND OUTLINED

Casablanca MAROC SOIR in French 2 Oct 79 p 8

[Text] As we announced in previous editions, Dr Rahhal Rahhali, minister of Public Health, has just made an official visit to Poland, during which he and his Polish counterpart signed an important cooperation agreement between the two countries in the area of health protection and medical science, for the years 1979-1983. Here are its broad outlines:

#### Plan for Cooperation

In accordance with Art 3 of the Economic and Technical Cooperation Agreement between the Kingdom of Morocco and the Polish People's Republic, signed on 15 October 1962, and the economic, scientific and technical cooperation agreement signed on 30 October 1976, and taking into consideration the conclusions of the first session of the Moroccan-Polish Joint Commission on Economic, Scientific and Technical Cooperation, held in Rabat from 6 to 9 April 1979 and recommending, in its part relating to technical cooperation among appropriate organizations, making contact for the purpose of deciding upon the conditions for cooperation in the various fields named below, "the contracting parties" agreed upon the following provisions:

#### Article 1

The contracting parties will develop cooperation in all fields of health and medical science.

They will agree upon mutual assistance, in order to continually promote in that way the healthy condition of both respective countries.

#### Article 2

The contracting parties will exchange materials, information and regulatory acts concerning:

Training and increasing the knowledge of medical and paramedical personnel.

Furnishing pharmaceutical products and technical material in accordance with the laws and regulations in effect in each of the two countries.

Methods of controlling medications.

Health organization and planning.

Sending medical and paramedical professionals.

#### Article 3

The contracting parties will exchange medical and paramedical personnel in the various fields of general and specialized medicine, for a total duration of 24 months, on an annual basis:

Epidemiology/ and contagious diseases

Nuclear medicine

Oncology

Radiology

General and pediatric surgery

Pediatrics

Neurosurgery

Traumatology and orthopedics

Re-education and functional readaptation

Metabolic diseases

Cardiovascular surgery

#### Article 4

The contracting parties will establish cooperation between the various institutions for research and post-graduate education.

#### Article 5

The contracting parties will inform each other concerning congresses, conferences and symposia in the health field and of an international nature, that may be organized in their countries. There will be mutual exchange of the texts of medico-scientific demonstrations.

#### Article 6

The contracting parties will annually organize, alternately in Morocco and in Poland, Moroccan-Polish Weeks of Medicine.

#### Article 7

For the purpose of enabling the health services of the Kingdom of Morocco to fulfill their mission, the ministry of Health and Social Welfare of the Polish People's Republic will put at its disposal a number of medical and paramedical personnel.

The duration of the commitment is to be one year, renewable, not to exceed four years.

#### Article 8

The contracting parties will provide for the experts stipulated in Art 3 of the present plan, free medical attention in case of illness during their stay in the receiving country.

#### Article 9

The costs occasioned by the exchanges of persons provided for in Art 3 will be settled as follows:

The sending party assumes the cost of the round trip journey to the capital of the partner country.

The receiving party assumes the cost of the stay and the move to the interior of its territory, in accordance with the visit program previously set. The total cost of the stay is determined according to the regulations in effect in the receiving country and on a reciprocal basis. The exchange of materials mentioned in Article 2 is free of charge.

#### Article 10

The two parties have decided to create a joint commission at the administrative level, called "Polish-Moroccan Joint Commission for Cooperation in the Field of Health Protection and Medical Science," which will meet every six months, alternately in Warsaw and Rabat. The first meeting will take place in mid-November 1979 in Rabat, for the purpose of putting this plan into operation. The Commission is charged with drawing up procedures relative to realization of the present plan on the basis of the proposals concluded in the addendum.

#### Article 11

This plan is put into operation from the day it is signed. Conceived and signed in Warsaw on 20 September 1979, with two original copies in the French



language and the Polish language, both texts being authentic.

The minister of Public Health of the kingdom of Morocco, Dr R. Rahhali.

The minister of Health and Social Welfare of the Polish People's Republic, Prof M. Sliwinski.

#### Addendum to the Cooperation Plan

In the field of health protection and medical science for the years 1979-1983.

The Polish-Moroccan Joint Commission for Cooperation in the Field of Health Protection and Medical Science is charged with putting into operation:

1. Sending a medical team for burn victims to the National Center at Meknes for three years.

2. Sending a medical team made up as follows:

One surgeon.

One ORL [otorhinolaryngologist].

One ophthalmologist.

One obstetrician-gynecologist.

One phthisiologist [physician specializing in tuberculosis].

One radiologist.

For each of these cities: Agadir, Azilal, Essaouira, El Hoceima, Errachidia, Nador, Meknes, Marrakech, Ouarzazate, Tetouan, Tangier.

3. Sending a team of specialists as follows:

Three blood transfusion specialists for Meknes, Marrakech, Oujda.

Three orthopedic surgeons and three neurosurgeons for the southern, central and northern regions.

Three specialists in nuclear medicine for Rabat, Meknes, Marrakech.

Ten stomatologists for the large centers.

Five anatomopathologists.

4. The Moroccan party formulates the request for an increase in the number of Moroccan students admitted to Polish academies of medicine.

5. Sending teaching nurses into the principal Moroccan hospitals.
6. Sending highly qualified training specialists into the six principal regions of the kingdom of Morocco for a period of three to six months to provide practical training for young Moroccan physicians and interns.
7. An exchange of Moroccan professors in Poland for a period yet to be determined, to set forth their own experience in technical, medical and surgical fields.
8. Sending engineers for the maintenance of hospital structures.
9. Within the framework of the activities of the association entitled "Moroccan-Polish Friendship Association," courses will be given in Warsaw for medical and paramedical personnel in Polish health organizations.
10. The contracting parties agree to establish direct and close relations of cooperation and exchange between the two hospital establishments: the Memorial Hospital Children's Health Center in Warsaw and University Children's Hospital in Rabat.
11. The contracting parties have agreed on the principles for realizing a number of projects subject to preliminary agreement of the authorities concerned:
  1. Construction of a pilot hospital completely equiped for post-graduate training of young Moroccan physicians.
  2. Study and construction of a medications factory whose product list will be drawn up by joint agreement.
  3. Participation in the building of nuclear medicine centers for the cities of Oujda, Meknes, Marrakech.
  4. Assistance with the traffic accident system (personnel, vehicles, telecommunications).

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## ANTIMALARIA DRIVE INTENSIFIED

Manila PHILIPPINES DAILY EXPRESS in English 30 Oct 79 p 2

[Text]

THE UPSURGE of malaria in Vietnam, Cambodia, Thailand, and other nearby Asian countries has alerted the Ministry of Health to intensify its malaria eradication campaign, particularly in provinces where the risk of malaria is high.

These provinces are in Palawan, Cagayan Valley, Mindanao and the Sulu archipelago.

"Malaria is well under control but we cannot relax," Dr. Delfin G. Rivera, director of the ministry's Malaria Eradication Service, said yesterday.

The intensified move was precipitated by the discovery of a male Vietnamese refugee in a camp in Caniguan, Puerto Princesa City, found positive with malaria. Since the camp is situated in a non-malarious area, it is believed that the victim has carried the malaria parasite from Vietnam.

...

THE necessary precautions were at once taken and the victim was subjected to closely supervised medication on malaria drugs for 14 days after which he was examined and pronounced negative of the parasite.

"In this case, there was not much cause for alarm because there are no breeding places of malaria mosquitoes in the area which are natural carriers of the disease," Rivera said.

But according to the director, it will be a totally different story in Morong, Bataan, where 10,000

Vietnamese refugees will be relocated in December. The place is mountainous and hilly and very ideal for the breeding of the "Anopheles Flavirostris" type of mosquito which is the transmitter of the disease.

He pointed out that this type of mosquito thrives only in slow, clear, flowing waters or small creeks which are well shaded and these abound in Lornon, the refugee relocation site in Bataan.

...

RIVERA said that if any one of the incoming refugees happens to be infected with the disease and he is bitten by this kind of malaria mosquito, transmission of the disease will be fast and if the transmitter is not killed in time, it can build up the disease into epidemic proportions.

Thus, a close survey of the area is being done and eradicating probable breeding places is carried out at once by disturbing their natural habitats with chemical changes which will make the deadly mosquitoes flee the places for other more ideal breeding places.

Precautions are also being taken to protect the people in the nearby poblacion of Morong by spraying houses with DDT insecticides.

Another equally important step being undertaken by the malaria eradication teams is the taking of blood smears of refugees as they land in Subic Bay before being taken to their assigned refugee camps.

# GOVERNMENT SAYS 12 DISTRICTS HIT BY ANTHRAX

Salisbury THE HERALD in English 3 Nov 79 p 7

[Text] A notice in yesterday's Government Gazette more than doubles the "anthrax areas" of Zimbabwe Rhodesia. It contains a schedule of 12 widely scattered districts which are stricken by the disease.

More than 20 people have died in the hospital of anthrax and Ministry of Health officials suspect many more have died in rural areas, Iana reports.

Anthrax, which is cattle-borne and fatal to humans and animals, has been steadily spreading and veterinary experts have blamed this on the high rate of terrorist-inspired stock thefts.

It is believed that terrorists who have handled infected carcasses have contracted the disease, as they have raided several clinics searching for antidotes.

The Gazette lists the following anthrax areas:

Bubi--Fingo Location; Gatooma--Chenjiri area, Sanyati TTL: Gokwe; Gwelo--Lower Gwelo TTL, Vungu area; Lomagundi--Chirau TTL, Magondi TTL, Umfuli TTL, Zwimba TTL, Chitomborgwizi area; Lupane; Nkai; Que Que--Silobela TTL, Zhombe TTL; Rushinga--Chimanda TTL; Selukwe--Selukwe TTL; Shabani--Runde TTL; Umzingwane--Mzinyatini TTL.

Mainly West

Our Midlands Representative reports from Que Que that Mr Peter Benzon, the chief animal health inspector for the Department of Veterinary Services, told Que Que Farmers' Association yesterday that anthrax in the Midlands was confined to the tribal trust lands, mainly those in the west.

"I have been getting rumors and reports of farmers reporting that their neighbors' cattle are dying from anthrax, but we have still not had a positive smear from any animal in the commercial farming area," he said.

Mr Benzon said as far as foot-and-mouth disease was concerned things had not changed much in the last month. They were hoping to get more of the Botswana vaccine, "which works very much better."

## MAJORITY OF ANTHRAX CASES CURED

Salisbury THE HERALD in English 7 Nov 79 p 3

[Text]

**BULAWAYO hospitals have treated 87 anthrax cases since August, a Municipal Health spokesman told Iana yesterday.**

A spokesman for Salisbury Health Department said two anthrax cases had been admitted, one last week and another the week before, to the Beatrice Road Infectious Diseases hospital.

A Bulawayo City Health Department spokesman said all but 15 cases, in the Thorngrove and Mpilo Hospitals, had been treated, cured and released.

The spokesman for the Beatrice Road hospital in Salisbury said a male patient from the Mrewa area had been discharged four days ago after treatment. A woman patient, from the Mtoko area, was still in hospital, but in a "good condition".

"The wound is healing nicely and she's just on antibiotics", the spokesman said.

The Bulawayo Health Department spokesman said: "They are coming in all the time, most of them from the Nkai area and from the tribal trust lands north of Que Que. There have been no cases from Bulawayo.

"They all have the type of disease which affects the skin. After a week's treatment, they are cured and released", he said.

Since the outbreak began in August in the Midlands — where stock theft is rife and veterinary controls have all but broken down in tribal areas — 20 people have died from the disease in Bulawayo hospitals.

**DISTRICTS**

Last week the Government Gazette published a list of 12 districts, officially classified as "anthrax areas".

White farming areas adjoining the affected tribal trust lands have not reported any cases, as control measures are still able to be taken.

Our Bulawayo correspondent writes that the Medical Officer of Health, Dr E. F. Watson, said yesterday the post-mortem on the body of Mr Nethele Dube, who collapsed and died in Leander Avenue on October 24, could not confirm definitely that he had anthrax.

He said: "For this reason, the Medical Superintendent at Mpilo Hospital, after consultation with the post-mortem team, decided not to notify me.

"There were signs of it in his lungs but in the absence of a culture, it could not be identified bacteriologically.

"We don't know if it was a case of anthrax or pneumonia."

CSO: 5400

## BRIEFS

SMALLPOX SHOTS STILL NEEDED--Vaccination against smallpox is still required in Zimbabwe Rhodesia, even though the World Health Organization last week declared the disease eradicated throughout the world. Dr Eric Burnett Smith, Secretary for Health, said on Friday vaccinations would continue for the time being because they were required by law under the Public Health Act. "We will amend the Act. It's just a matter of getting the administrative machinery moving to do it," Dr Smith said. The act requires that travellers to Zimbabwe Rhodesia must be vaccinated within 3 months of their arrival. The last reported case of smallpox in Zimbabwe Rhodesia was in 1970. The World Health Organization requires that an area be free of the disease for at least 2 years before it is certified as smallpox free. [Text] [Salisbury THE SUNDAY MAIL in English 4 Nov 79 p 5]

CSO: 5400



SPAIN

BRIEFS

CHOLERA IN NAVARRE--In the past few days, 16 people have entered hospitals in the province of Navarre with cholera. Most of them are children. Five have already been given the all clear. [LD091534 Madrid Domestic Service in Spanish 1400 GMT 9 Oct 79 LD]

CSO: 5400

## THAILAND

### KHMER ARRIVALS DYING OF MALARIA, INTESTINAL DISEASES

BK170105 Bangkok BANGKOK POST in English 17 Oct 79 p 1 BK

[Text] Khmers who crossed the border during the past week to take refuge in Prachin Buri Province are dying daily of malaria and intestinal diseases, an official source said yesterday.

Most of the refugees are camped at Ban Klong Kaithuen in Watthana Nakhon and Ban Khlong Wa in Aranyaprathet.

The source said that medical staff to tend to the refugees is inadequate and at least 20 die daily at the Ban Khlong Wa centre.

The source pointed out that almost 100 per cent of the refugees who flooded into Thailand during the past week were seriously suffering from malaria and malnutrition.

The refugees at Ban Khlong Kai Thuan had just been moved out from Aranyaprathet and aid from international organisations had yet to reach them so Thai troopers had to buy food for them out of their own pockets.

The American and French ambassadors, Morton Abramowitz and Jean Soulier, yesterday visited the refugee centres at Ban Klongwan and Ban Khlong Kai Thuan.

The source also said that sporadic fighting was still continuing near the Thai border, but that the exchange of gunfire between the rival Khme forces mostly occurred at night.

The Pol Pot forces reportedly lobbed several mortar shells at the Heng Samrin troops at Pho Sam Ton and Ban Pho Nimit Monday night and the sound of artillery fire was heard in the Ban Tabprick area yesterday morning.

CSO: 5400

## VIETNAM

### BRIEFS

DISEASE PREVENTION MEASURES--Hanoi, 29 Oct--Preventive measures against dry-season diseases are being stepped up in Ho Chi Minh City and the whole of the south. In all precincts and suburban districts of Ho Chi Minh City, people are guided to observe sanitary rules to participate in environmental protection. The health service in Thuan Hai Province on the central coast has administered more than two million doses against cholera and typhoid fever. Hundreds of mobile anti-epidemic teams have been founded, the members of which include more than 80 percent of the health service and Red Cross personnel. The teams are cooperating with mass organizations in preventing dry-season epidemics, particularly in wiping out flies and mosquitoes, the most notorious germ-carriers. [Text] [Hanoi VNA in English 0314 GMT 29 Oct 79 OW]

CSO: 5400

# WIRE SERVICE REPORTS ON CHOLERA SITUATION

Kinshasa AZAP in French 1805 GMT 25 Sep 79

[Text] The health situation in the equator region is developing favorably. Not one case of cholera nor one victim has been registered since the 16th of August. And the number of sick who were stricken with the disease before that date has decreased notably.

Citizen Tshisungu, state commissioner of public health, made this statement to the press last week in Mbandaka during his 1-week inspection of the equator region.

The city of Mbandaka in particular need not worry because not a single case has been declared and proved, the state commissioner stated before confirming the statistics established by the Regional Committee Against Epidemics.

According to these statistics, 265 cases, including 70 deaths, were registered in the Bumba and Lisala zones since the cholera epidemic first started in this part of the country.

When questioned about the trouble concerning the boats of Mudimbi and Tshatshi, the public health official stated that cases of cholera have been discovered there. He then cited the measures taken by his department to prevent the repetition of these cases, namely: the number of passengers on the Onatra boats will be limited, all boats must respect certain conditions of hygiene, boats must be disinfected on arrival as well as on departure, and a medical team and military personnel will be on board the larger boats to supervise and enforce these measures.

The state commissioner emphasized in particular that, in order to prevent this disease, the population must respect the following health measures: hands must be washed before eating and after going to the toilet, water must be boiled before drinking, toilets must be kept clean, and water should not be taken from the river. He also said that he has given medical groups in the equator region a large quantity of anti-cholera vaccines so that the program of vaccinating the population against cholera could be continued. Citizen Tshisungu then announced that the airports of Bumba and Lisala, which the Executive Council closed on 27 August, have been reopened and that the

circulation of cargo boats has been reauthorized. Nevertheless, he added, the mail boats will be prohibited until further notice while the cargo boats will be under medical supervision during their assigned trips.

The public health official, who plans to meet with doctors of this sub-region during his visit to Mbandak, stated that he was pleased that the Regional Committee Against Epidemics had been established and that there had been accomplishments made in this area.

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## AUSTRALIA

### BRIEFS

THREAT TO CATTLE--A small brown stomach worm has become one of the most dangerous parasites in Australian cattle, a veterinary expert said yesterday. The veterinary technical manager of Roche-Maag Ltd, Dr Rod Chevis, said the parasite, known as ostertagia, could have replaced tuberculosis and contagious abortion as the most common and costly disease in the cattle industry. Dr Chevis was in Melbourne to introduce Roche-Maag's new cattle concentrate, Synanthic C, which he said had proved effective in both dairy and beef cattle for treatment of ostertagia. [Excerpts] [Canberra THE AUSTRALIAN in English 24 Sep 79 p 3]

CSO: 5400



## SUCCESS OF DRIVE TO ERADICATE FOOT-AND-MOUTH REPORTED

Johannesburg THE STAR in English 31 Oct 79 p 8

[Article by Deon du Plessis: "Botswana Wins a Biological War"]

[Text]

**Foot-and-mouth disease does not exist in Botswana at the moment, thanks to an amazing project in Gaborone's industrial area, DEON DU PLESSIS, of The Star's Africa News Service, reports from Gaborone.**

The French are waging biological warfare inside a super-sealed working capsule in the industrial sites here.

Surrounded by three guarded fences and a low concrete wall to keep out rodents, equipped with its own sewerage plant, sterile beyond belief, the place has the vaguely sinister air of a "germ warfare" laboratory of popular fiction.

Even Dr Eddie Bradley, senior Botswana Government veterinarian, gestures through the windows at the French technicians inside and says: "There's enough in there to infect most of southern Africa."

But forces for good are at work inside the hermetic capsule. At this amazing place, unique in southern Africa, they are preparing vaccine which knocks out the dread cattle scourge, foot-and-mouth disease.

### Catastrophe

And if the centre itself and the men working there have the aspect of a national priority, it is because that is precisely what they amount to.

Botswana has three major exports: beef, diamonds and labour.

Most of the beef goes to the European Economic Community (EEC) which will take none from a foot-and-mouth infected area.

Because of severe outbreaks of the disease, particularly in the north, no beef has been exported to the EEC for nearly two years. In Botswana's circumstances this is a national catastrophe.

British foot-and-mouth vaccines were proving hopeless for the specific task: the disease was even ravaging herds which had been thoroughly dosed.

The Botswana Cabinet gave the order, no matter what the cost: top priority must be given to finding an antidote.

The search led Botswana's Director of Animal Health, Dr Jack Falconer, to the French, who by cultivating the virus with healthy cattle tongues, appeared to have the answer.

In the middle of 1978, ground was cleared at Gaborone's industrial site and the entire working capsule, fitting into a Hercules transport aircraft with only centimetres to spare, was flown from France.

The French started work immediately. Dr Falconer explains: "To put it very simply, tissue from infected animals is introduced to the healthy tongues. After chemical processes you end up with a tank full of live foot-and-mouth virus. Kill the virus and that's your vaccine."

"This method is more expensive than the British way, primarily because we need 3 000 cattle tongues (most come from South Africa) to produce 100 000 doses of vaccine. But this

may be a complete success."

Government teams took the vaccine into remote and infertile areas, injecting every head of cattle they found.

Foot-and-mouth does not exist in Botswana any more. Agriculture secretary Mr Dave Findlay will be completely at ease only once there have been repeated inoculations and no outbreaks for more than a year, but the authorities are more hopeful that they have ever been. In exhaustive tests even a fraction of a cubic centimetre of the vaccine has been found to protect an ox.

Precautions at the centre are formidable.

Air pressure inside the capsule is lower than outside which means when doors are opened air can only be sucked in; nothing leaks out.

### Destroyed

Technicians entering the capsule strip naked in a first room, take a shower in a second and put on sterilized working clothes in a third before entering the "holy of holies."

All waste, even sewage from the toilet in the working centre, is dealt with by an on-site sewage plant.

Any cloven-hoofed animal found within a considerable radius of the

centre — the perimeters are marked with forbidding signs — is destroyed.

Already the Botswana Government has sold some of its new vaccine to South Africa and Zimbabwe Rhodesia. There is currently an order from SWA/Namibia.

Next year the centre will be expanded and the target is 21-million doses of vaccine a year.

Dr Falconer sees no reason why this remarkable project — which so far has cost nearly R2-million — should not become the foot-and-mouth prevention centre for all of southern Africa.

### PHOTO CAPTIONS

1. Daniel Fargeaud, leader of the French technicians currently running Botswana's foot-and-mouth vaccine laboratory, inspects one of the hamsters which are used for initial testing of the drug.
2. A French-trained Botswana technician at work inside the "holy of holies." The reflection in the picture is due to the thick glass enclosing the working capsule.

CSO: 5400

## PARAGUAY

### BRIEFS

FOOT-AND-MOUTH CASES--The members of the Rural Association of Paraguay met with the National Service for Animal Health to study measures to be taken in view of the insistent cases of foot-and-mouth disease registered in different cattle farms in the country. [Asuncion ABC COLOR in Spanish 30 Oct 79 p 17 PY]

CSO: 5400

## INTER-AMERICAN AFFAIRS

### BRIEFS

GEPLACEA SUGARCANE DISEASES PLAN--The Economic Group of Latin American and Caribbean Sugar Exporting Countries [GEPLACEA] has announced in Mexico City an action plan to cope with and prevent the smut and rust diseases that attack sugarcane fields on the continent. The plan will be introduced officially at the 11th plenary meeting of the 21 GEPLACEA member countries to be held next week at the Cocoyoc Beach resort located about 10 km south of the Mexican capital. [Text] [FL191102 Havana Domestic Service in Spanish 1030 GMT 19 Oct 79 FL]

CSO: 5400

## AUSTRALIA

### BRIEFS

APPEAL AGAINST LOCUSTS -- The NSW Government has asked the Prime Minister, Mr Fraser, to lend three military helicopters to help spot plague locusts in far western parts of the State. More than 100,000 square kilometres of NSW is facing potentially the most serious locust plague in 25 years. The State Government helicopters are already searching for locust outbreaks. So far, other locust control measures seem to be running smoothly, the Minister for Agriculture, Mr Day, said when visiting the North Star and Moree districts yesterday. Mr Day, with the Country Party member for Barwon, Mr Wal Murray, landowners and Department of Agriculture officers, inspected locust bands in cultivated areas. The hoppers were very small--only one centimetre long--but they were audible as they moved across the paddocks. While the locusts immediately threaten wheat crops, northwestern farmers feel they offer a bigger threat to tender young summer crops appearing the next six to eight weeks. [Excerpts] [Sydney THE SYDNEY MORNING HERALD in English 24 Sep 79 p 2]

HELP FROM MILITARY--Canberra.--The Federal Government has ordered the defence forces to help the NSW and SA Governments fight plague locusts. Four helicopters, three in NSW, and one in SA, will help State authorities spot locust swarms, while 134 soldiers will help spray them and provide communications facilities in SA. In NSW, three RAAF Iroquois helicopters from the RAAF base at Fairbairn, Canberra, will supplement State-controlled aircraft to spot locust swarms west of the Great Divide. They are expected to operate between Dubbo and the Queensland border. In South Australia, an Army Kiowa helicopter will fill a similar role. As well, 134 soldiers from 3rd Battalion, RAR Australia, will operate in three-man teams from Jamestown, north of Adelaide, locating and spraying locusts. A ten-man detachment of radio operators will provide ground-to-air communications. [Excerpts] [Sydney THE SYDNEY MORNING HERALD in English 6 Oct 79 p 21]

CSO: 5400

## FUSARIUM OXYSPORUM BLIGHT CONTROLLED

Salisbury THE SUNDAY MAIL in English 11 Nov 79 p 6

[Text] A FUNGAL blight that had endangered about 20 percent of the country's commercial mukwa trees was being controlled by a programme of selective cutting and would not present any problems for the commercial hardwood industry, a Forestry Commission ecologist said last week.

Mr Geoff Calvert, a forestry ecologist based in Bulawayo, said the condition was more accurately termed a "die-off" than a disease. The fungus, called *fusarium oxysporum*, which seemed to kill the trees, apparently occurred naturally in soil and only became dangerous after the trees had undergone stress, as during a drought.

"At first, three to five of the main branches will be affected. The leaves turn yellow and fall off about half-way through the summer and eventually the crown dies," Mr Calvert said.

The die-off was first observed in this country during the 1930s, Mr Calvert said. It cropped up again in the late 1940s and late 1950s but efforts to diagnose it were unsuccessful. During the late 1960s there was a surge in the number of trees affected but it eventually levelled off.

The fungus was isolated several years ago when Frank Knight, a student at Hamilton High School in Bulawayo, used infra-red film to photograph stress in infected mukwa branches and then grew the fungus to the reproductive stage as part of a school science project.

"It's not a disease that affects the tree as timber, so it's possible to use the wood of an unhealthy tree commercially. It's only after the tree dies that it loses its resistance to pests and the wood is damaged," Mr Calvert said.

In cutting down unhealthy trees and leaving the healthy ones the overall health of the mukwa forests was improved.



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29 Nov. 1979

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